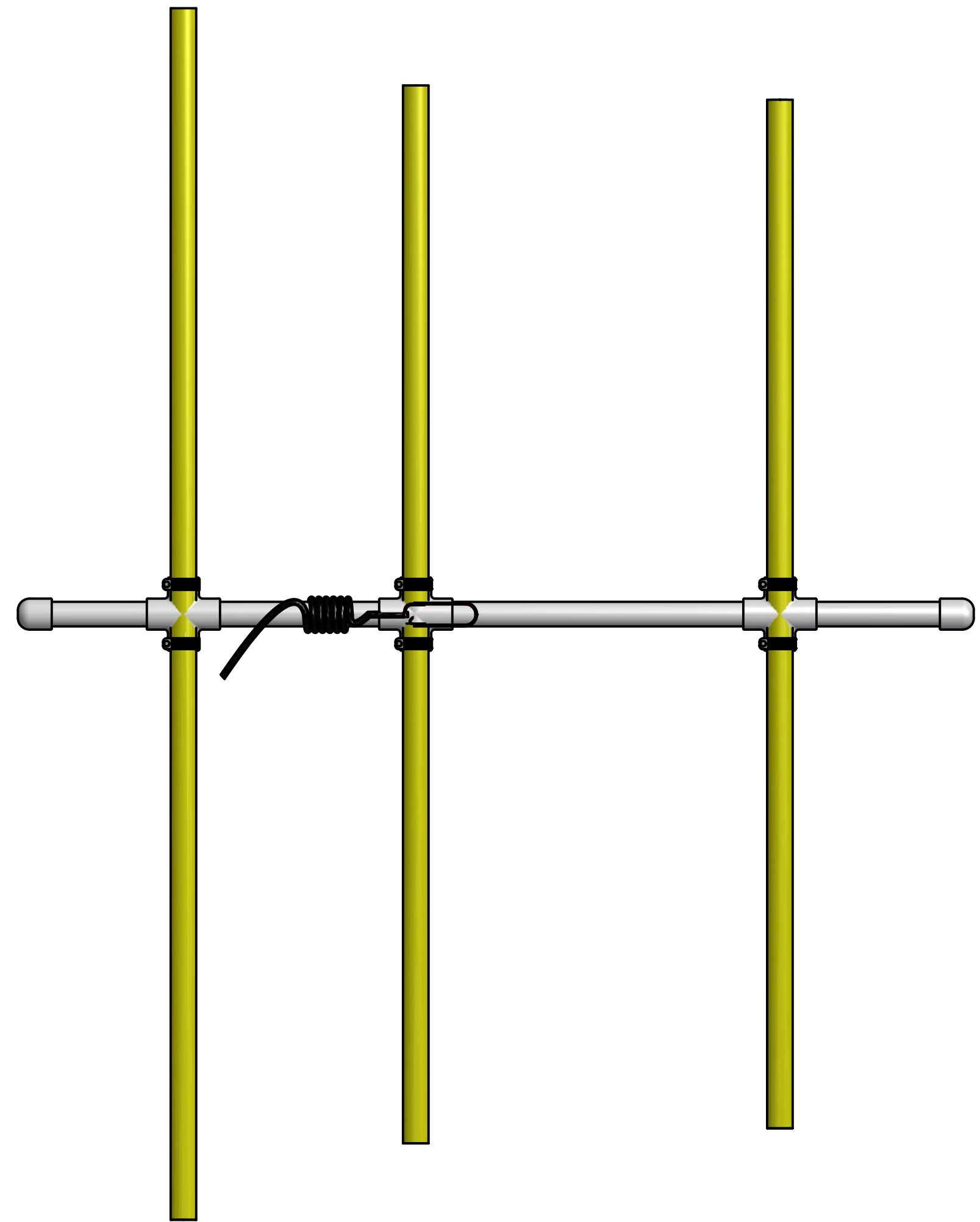
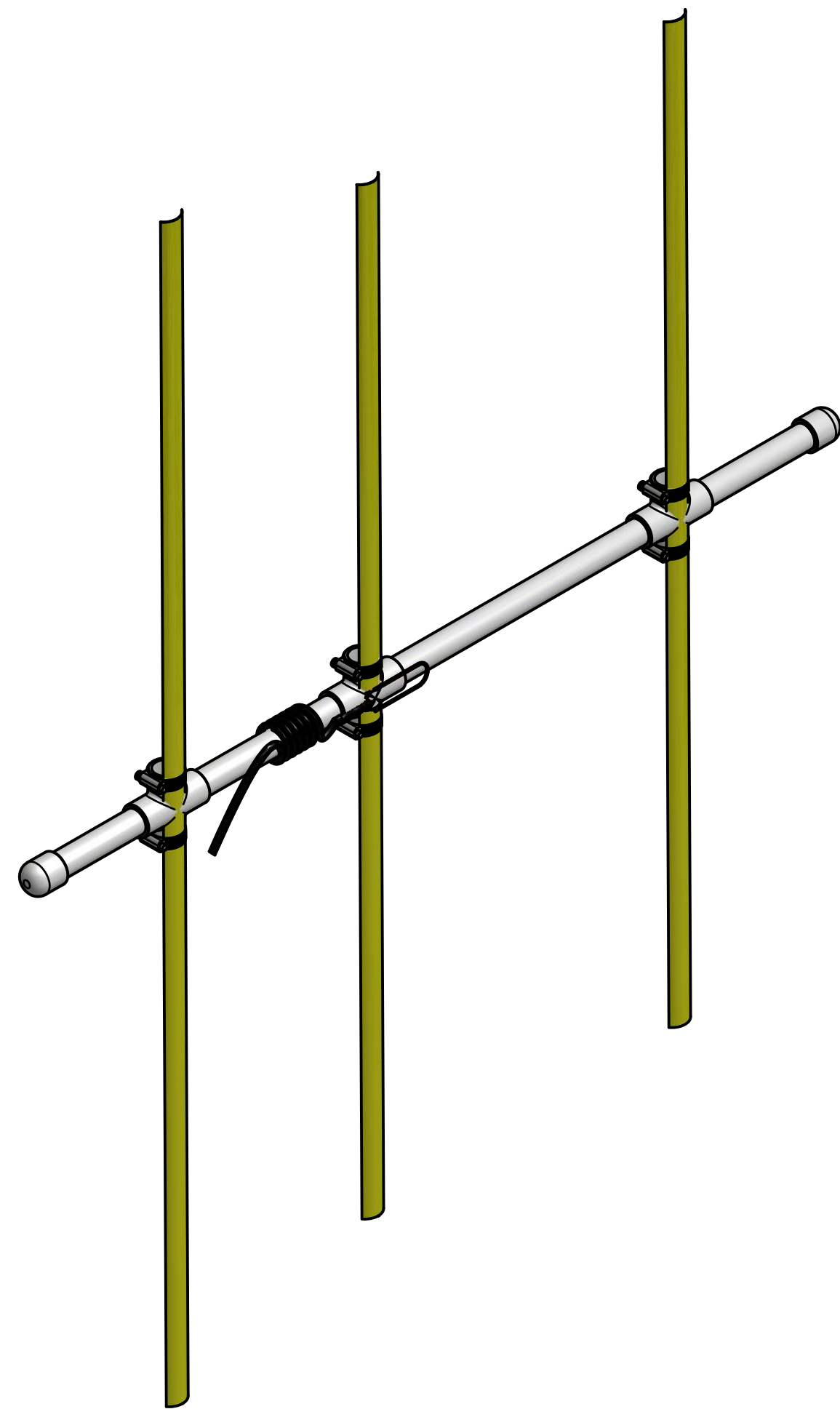


# 3 ELEMENT TAPE MEASURE YAGI

Prints By: Jeffrey Bail - NT1K

[Http://www.NT1K.com](http://www.NT1K.com)



A Simple yet effective 3EL VHF Yagi directional antenna that could be used for Direction Finding, SOTA, Emergency Communications and other things that needs an improved antenna for your handheld transceiver compared to its stock antenna



# 3 ELEMENT TAPE MEASURE YAGI

## Parts List

- Approx 3ft 1/2" Sched 40 PVC Pipe
- 2 PVC NON-Threaded Caps (1/2")
- 3 PVC Cross Tee
- 1" Wide Tape Measure (At least 10' Long)
- Variable Length of RG-58 Coax Cable
- 6 Stainless Steel Hose Clamps (Adjustable from 7/8 - 1-1/4" or Near)
- 5" of #14 or #12 AWG Soild (Non Stranded) Wire
- Solder
- Sand Paper (Between 60-120 Grit)
- (Optional) Dremel/Rotary Tool with Sanding/Grinding Bit
- Electrical Tape
- PVC Primer / PVC Glue (Optional)

## Tools List

- PVC Cutter / Saw
- Marking device (Sharpie)
- Tin Snips (Aviation Snips) or Shear
- Soldering Iron
- Screwdriver (Flat Head)

## Cutting / Assembly Instructions

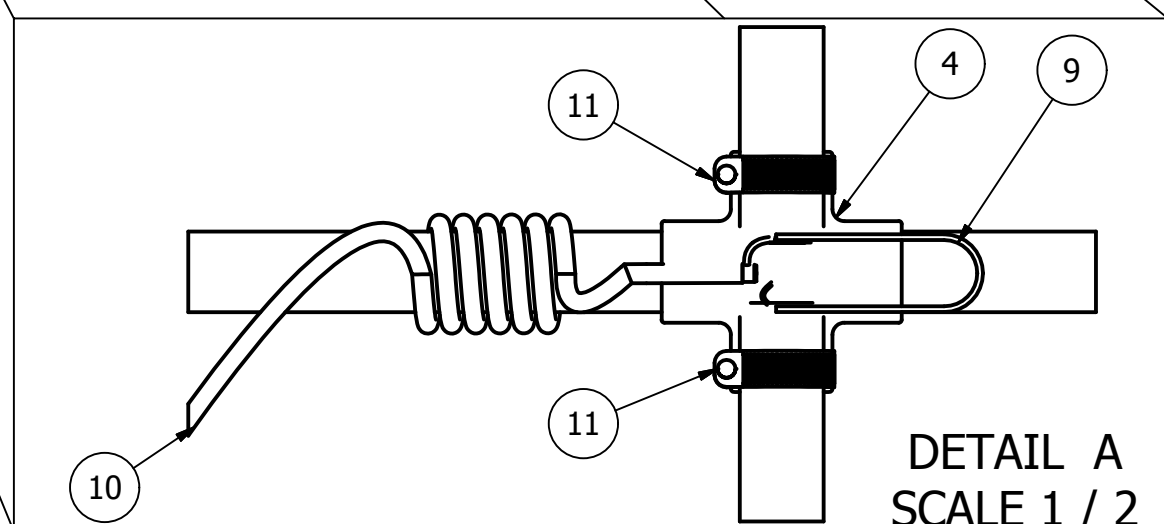
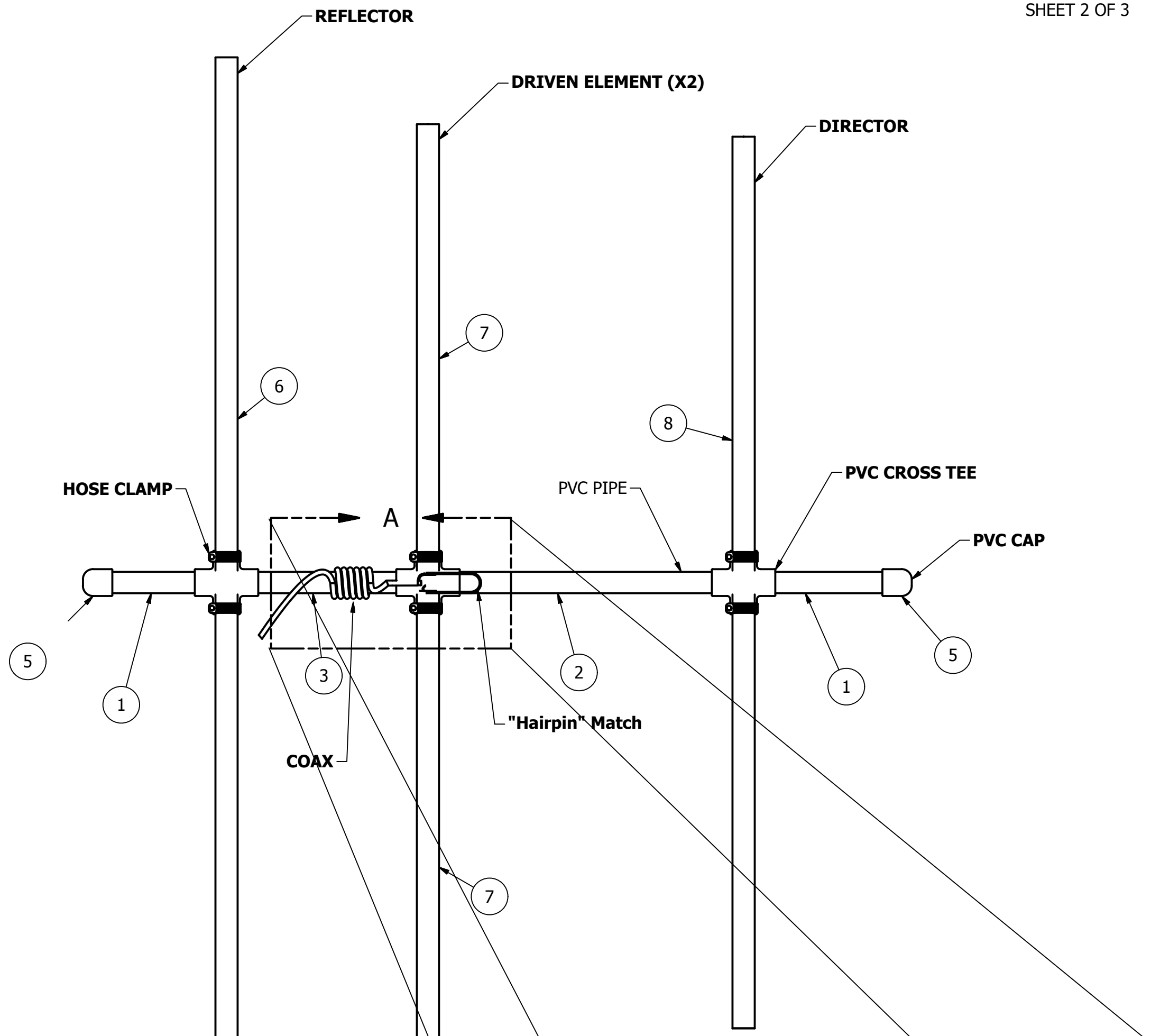
(Refer to Page 2 and 3)

1. Mark and Cut PVC Pipe to proper lengths
2. Deburr cut PVC pieces with sand paper
3. Using a flat hard surface, assemble PVC pipe, with caps and Cross Tees as shown on this print
4. (Optional) Un-assemble, prime and glue PVC back together.
5. Mark and cut tape measure using tin snips to the proper lengths as shown on blue print
6. On the 17.75" tapes, use sandpaper/dremel to remove plastic and painted coating about 3/8" in diameter to expose the bare metal.
7. Bend wire into "U" shape having approx .75" Gap
8. Assemble Yagi using the tape measure and clamps.
9. On the Driven Element, Solder Hairpin wire match
10. Strip Coax to expose about 3/16" of the center conductor, Make wire from braided shield
11. Solder the center conductor to the bare spot of one of the 17.75" tape and solder the shield to the other 17.75 tape.
12. Wind Coax 6 turns around the 1/2" PVC Pipe and secure with electrical tape

**ALL DONE!** Adjust SWR by adjusting the spacing between to the two 17.75 Tapes

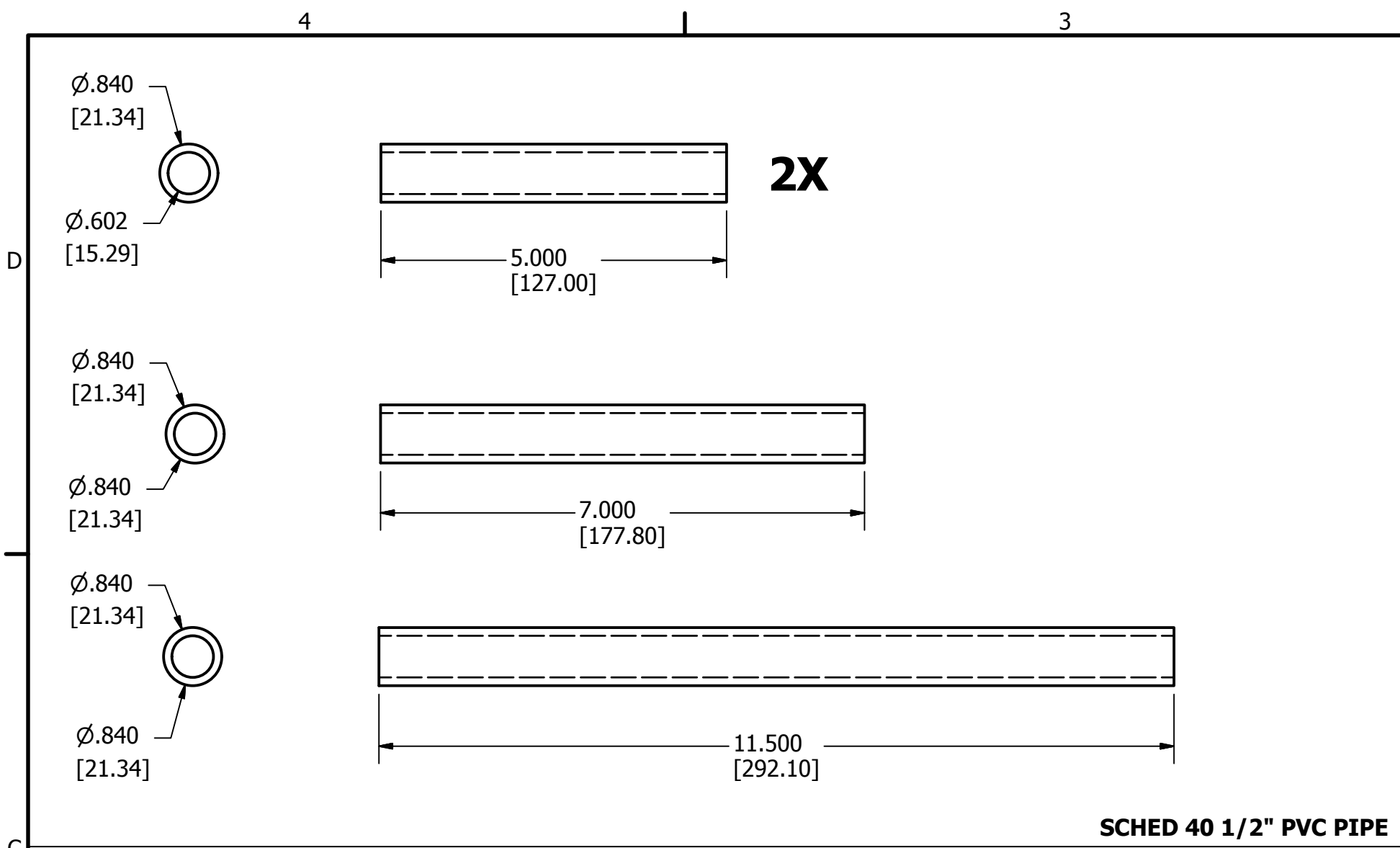
**Credit To:**  
 Joe Leggio (WB2HOL)  
 Andy Woolard (AA4XS)  
 Tom Niderost (K4TMN)

Prints By: Jeffrey Bail - NT1K [Http://www.NT1K.com](http://www.NT1K.com)

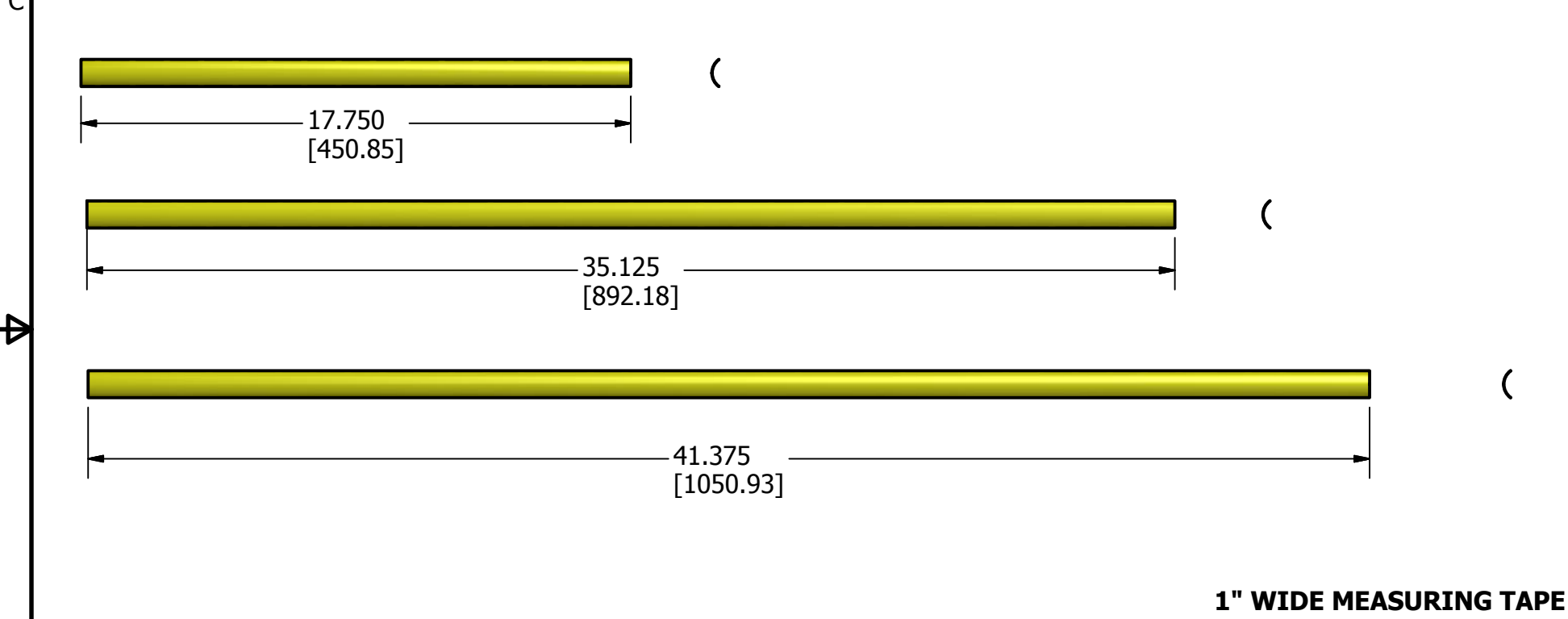


PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	5in-PVC-Pipe	1/2" Sched 40 PVC Pipe - 5in
2	1	11p5in-PVC-Pipe	1/2" Sched 40 PVC Pipe - 11in
3	1	7in-PVC-Pipe	1/2" Sched 40 PVC Pipe - 7in
4	3	4Way-PVC-Tee	PVC CROSS FITTING (1/2" PIPE)
5	2	Cap-PVC-End	1/2" PVC End Cap (Non Threaded)
6	1	41p3755-TapeMeasure	41.375 (41-3/8)" Tape Measure
7	2	17p75-TapeMeasure	17.75 (17-3/4)" Tape Measure
8	1	35p125-TapeMeasure	35.125 (35-1/8)" Tape Measure
9	1	Hairpin	5" of #12 or #14 AWG Soild Copper Wire
10	1	CoiledRG	X" RG-58A 50Ohm Coaxial Cable
11	6	Clamp	7/8" - 1-1/4" Stainless Hose Clamp

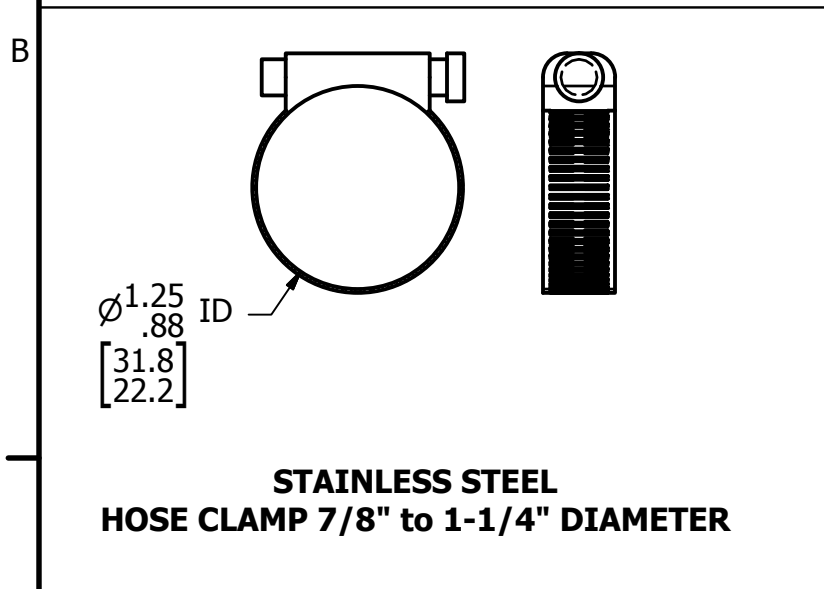
DETAIL A  
SCALE 1 / 2



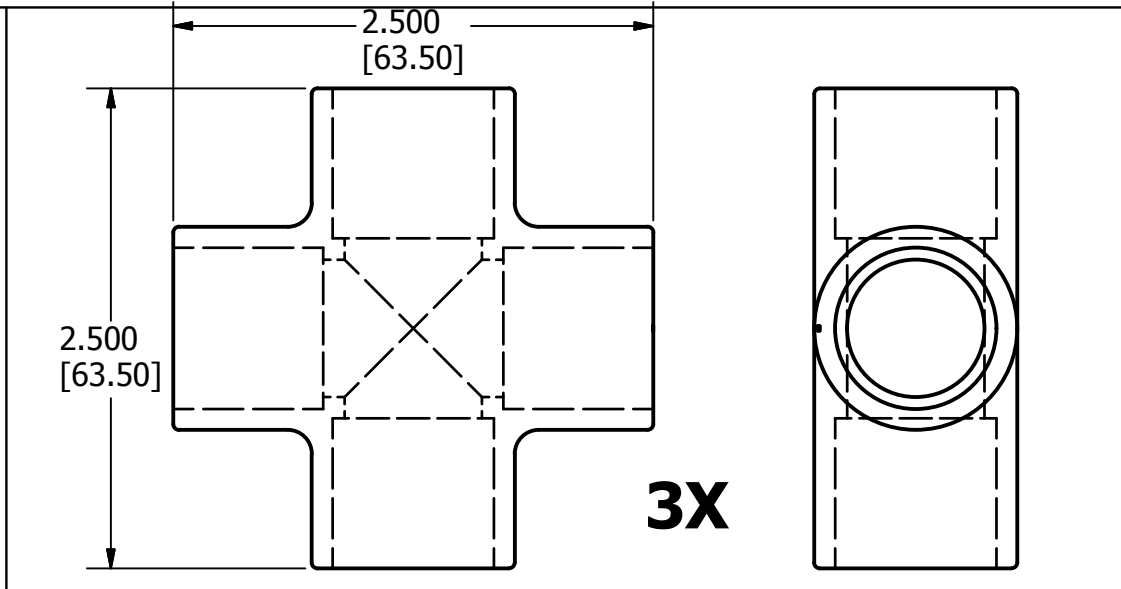
SCHED 40 1/2" PVC PIPE



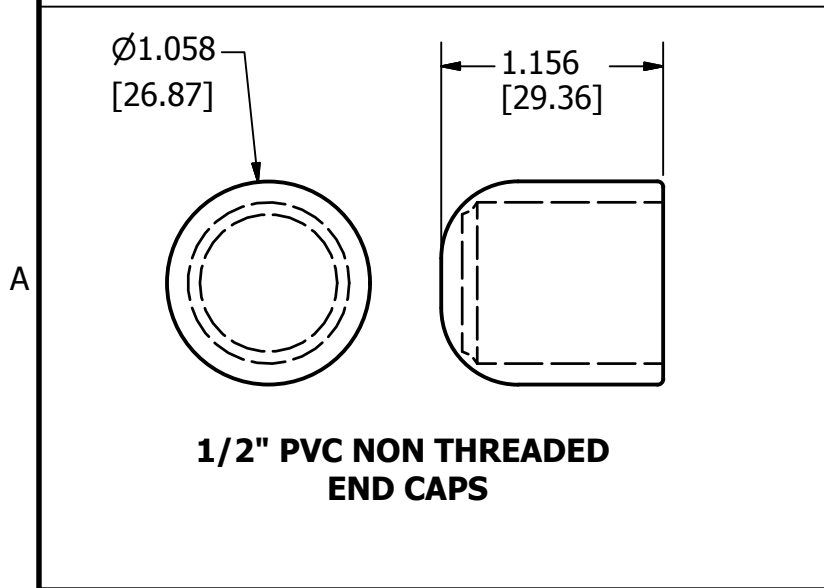
1" WIDE MEASURING TAPE



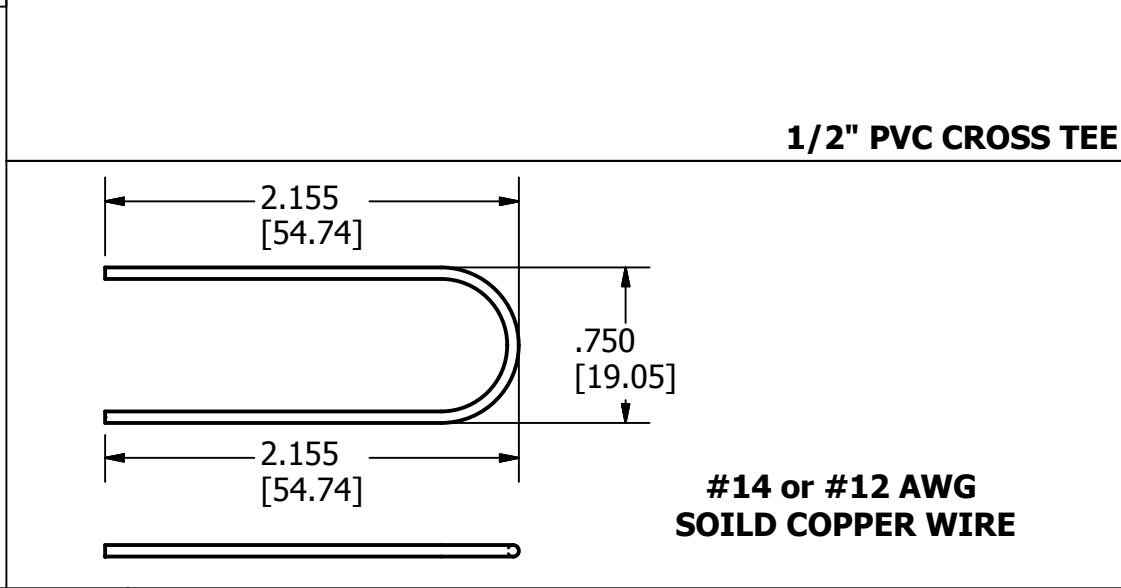
STAINLESS STEEL HOSE CLAMP 7/8" to 1-1/4" DIAMETER



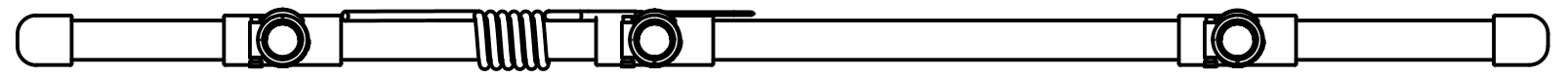
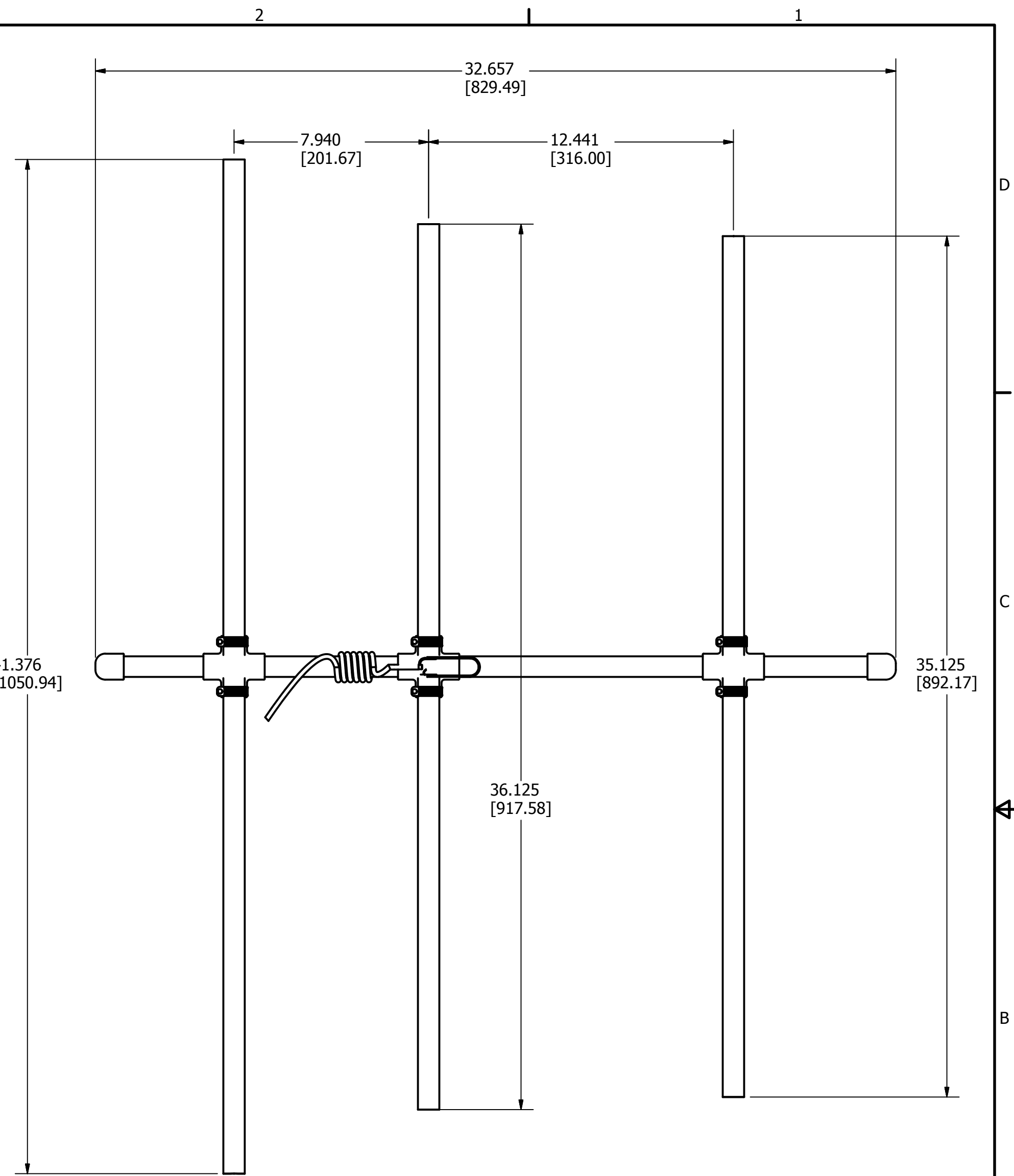
1/2" PVC CROSS TEE



1/2" PVC NON THREADED END CAPS



#14 or #12 AWG SOLID COPPER WIRE



**ALL DIMENSIONS SUBJECT TO CHANGE VARIES DEPENDING ON MFG**